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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,290	02/23/2004		22048/18	8317
1912	7590	07/11/2006	EXAMINER	
AMSTER, ROTHSTEIN & EBENSTEIN LLP 90 PARK AVENUE NEW YORK, NY 10016			SHEWAREGED, BETELHEM	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/785,290	BARCOCK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Betelhem Shewareged	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/10/06</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicant's response filed on 04/27/2006 has been fully considered. The claim objections have been withdrawn in view of Applicant's amendments.
2. Claims 1 and 2 are amended, and claims 1-12 are pending.

### ***Claim Rejections - 35 USC § 103***

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) in view of Farooq et al. (US 6,703,112 B1).
4. Ohbayashi discloses an ink jet recording sheet comprising a support and an ink absorptive layer on the support (abstract). The ink absorptive layer comprises boric acid (col. 15, line 51), metal ion compound (col. 18, line 10), and organic sulfur compound (col. 17, lines 14-31). The ink absorptive layer may be comprised of two or more layers (col. 17, line 1), and the more than two ink absorptive layers are equivalent to the claimed protective layer, dye fixing layer and ink absorbing layer. Ohbayashi does not teach an organometallic ion compound.
5. Farooq teaches an ink jet coating composition to be provided on a support, wherein the composition comprises organometallic multivalent salt (col. 4, line 58 thru col. 6, line 56) and pigment drying agents such as aromatic carboxylic acid containing sulfonic acid group attached to the aromatic ring (col. 8, lines 32-50).
6. Ohbayashi and Farooq are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the organometallic ion of

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Farooq with the invention of Ohbayashi so as to take care of the pigment management function and to control the smudgeness and drying of the film (col. 3, line 25 of Farooq). Furthermore, the use of aromatic carboxylic acids along with metal ions is well known in the ink jet recording art in order to serve as drying agents for ink jet receptor media (col. 8, line 17).

7. Farooq does not disclose the claimed ratio of metal ion compound to organic sulfur compound. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the ratio of metal ion compound to organic sulfur compound in order to improve light fastness and minimize bleeding (col. 17, line 4 and col. 18, line 4 of Ohbayashi). A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

### ***Response to Arguments***

8. Applicant's argument is based on the function of the components, (i.e., the boric acid, the metal ion compound and the organic sulfur compound) in the layer. This argument is not persuasive because a recitation with respect to the manner in which the claimed components are intended to be employed do not differentiate the claimed components from the prior art components, (i.e., the boric acid, the metal ion compound and the organic sulfur compound). *Ex parte Masham*, 2 USPQ2d 1647 (1987).

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Ohbayashi teaches multiple ink absorptive layers. Even though each layer contains the claimed components, the top layer that also contains the claimed components is a separate layer. Even though the top layer is capable of absorbing ink, it is also capable of protecting the action of ozone because the layer contains the claimed components. Applicant further argues that the ink does not remain in the claimed protective layer. This argument is not persuasive because such limitation is not recited in the original claims and is not disclosed in the specification. In fact the protective layer contains a binder (page 11, paragraph 41 of current specification), which may absorb some of the ink. For the above reasons, claims 1-12 stand rejected.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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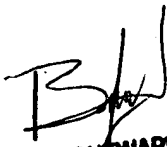
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B.S.  
June 30, 2006.

  
BETELHEM SHEWAREGED  
PRIMARY EXAMINER